



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2023-0924; Project Identifier MCAI-2022-01262-T; Amendment 39-22489; AD 2023-13-04]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Airbus SAS Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is superseding Airworthiness Directive (AD) 2021-16-18, which applied to all Airbus SAS Model A330-200 Freighter, A330-200, A330-300, A330-800, A330-900, A340-200, A340-300, A340-500, and A340-600 series airplanes. AD 2021-16-18 required repetitive inspections of certain fuel pumps for cavitation erosion, replacement if necessary, revision of the operator's existing minimum equipment list (MEL), and accomplishment of certain maintenance actions related to defueling and ground fuel transfer operations. This AD was prompted by reports of a fuel pump showing cavitation erosion that exposed the fuel pump power supply wires, and a determination that affected fuel pumps must be replaced with new, more erosion resistant pumps. This AD continues to require the actions in AD 2021-16-18, and also requires replacement of affected parts, which would terminate the repetitive inspections, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. This AD also prohibits the installation of certain affected parts. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:**

*AD Docket:* You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0924; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

*Material Incorporated by Reference:*

- For EASA material incorporated by reference in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu); website [easa.europa.eu](https://easa.europa.eu). You may find this material on the EASA website at [ad.easa.europa.eu](https://ad.easa.europa.eu).

- For Eaton service information incorporated by reference in this AD, contact Eaton Limited, Customer Support, Abbey Park, Southhampton Road, Titchfield, Fareham, Hampshire, PO14 4QA, U.K.; telephone +01 329853000; Fax +01 329853714.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0924.

**FOR FURTHER INFORMATION CONTACT:** Vladimir Ulyanov, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590 telephone 206-231-3229; email [Vladimir.Ulyanov@faa.gov](mailto:Vladimir.Ulyanov@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2021-16-18, Amendment 39-21681 (86 FR 60560, November 3, 2021) (AD 2021-16-18). AD 2021-16-18 applied to all Airbus SAS Model A330-201, A330-202, A330-203, A330-223, A330-223F, A330-243, A330-243F, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342, A330-343, A330-841, A330-941, A340-211, A340-212, A340-213, A340-311, A340-312, A340-313, A340-541, and A340-642 airplanes. AD 2021-16-18 required repetitive inspections of certain fuel pumps for cavitation erosion, replacement if necessary, revision of the operator's existing MEL, and accomplishment of certain maintenance actions related to defueling and ground fuel transfer operations. The FAA issued AD 2021-16-18 to address fuel pump erosion caused by cavitation.

The NPRM published in the *Federal Register* on April 18, 2023 (88 FR 23589). The NPRM was prompted by AD 2022-0197, dated September 22, 2022, issued by EASA (EASA AD 2022-0197), which is the Technical Agent for the Member States of the European Union (also referred to as the MCAI). The MCAI states that new, more erosion resistant pumps have been developed to address the unsafe condition. The MCAI states there have been reports of fuel pumps showing cavitation erosion. This condition, if not detected and corrected, could result, in a case where the pump is running dry, in an ignition source in the fuel tank, which may result in a fuel tank explosion and consequent loss of the airplane.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0924.

In the NPRM, the FAA proposed to retain the requirements of AD 2021-16-18 and require replacement of affected parts, which would terminate the repetitive

inspections, as specified in EASA AD 2022-0197. The NPRM also proposed to prohibit the installation of certain affected parts. The FAA is issuing this AD to address the unsafe condition on these products.

### **Other Relevant Rulemaking**

Note 4 of EASA AD 2022-0197 refers to EASA AD 2015-0194. EASA AD 2015-0194 corresponds to FAA AD 2016-20-10, Amendment 39–18676 (81 FR 71593, October 18, 2016) (AD 2016-20-10). AD 2016-20-10 requires the replacement of fuel pumps that have part number (P/N) 568-1-28300-001, 568-1-28300-002, 568-1-28300-100, or 568-1-28300-101 with a pump having a part number other than those part numbers. However, operators should be aware that this final rule prohibits installation of P/N 568-1-28300-103 as of the effective date of this AD.

AD 2016-20-10 also requires the replacement of P/N 568-1-28300-101 within 72 months or 96 months after November 22, 2016 (the effective date of AD 2016-20-10), depending on the configuration of the installed fuel pumps. Paragraph (5) of EASA AD 2022-0197 specifies to replace P/N 568-1-28300-101 at location A within 5 years after the effective date of that AD. Paragraph (6) of EASA AD 2022-0197 specifies to replace P/N 568-1-28300-101 at location B within 7 years after the effective date of that AD. These new compliance times do not apply to those affected by AD 2016-20-10.

Therefore, the FAA has clarified the compliance time in paragraph (h)(10) of this AD.

### **Discussion of Final Airworthiness Directive**

#### **Comments**

The FAA received comments from Air line Pilots Association, International (ALPA), who supported the NPRM without change.

#### **Conclusion**

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement

with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

#### **Related Service Information Under 1 CFR Part 51**

EASA AD 2022-0197 specifies procedures for repetitive inspections of all affected parts; replacement of affected parts if necessary; replacement of certain part-numbered affected parts, which allows a terminating action for the repetitive inspections; updating of the applicable Master Minimum Equipment List (MMEL), and certain maintenance actions related to defueling and ground fuel transfer operations. EASA AD 2022-0197 also prohibits certain affected parts from being installed.

The FAA also reviewed Eaton Service Bulletin 8810-28-06, Revision 2, dated March 1, 2019, which defines erosion cases and breakthrough.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

#### **Costs of Compliance**

The FAA estimates that this AD affects 112 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

##### **Estimated costs for required actions**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Retained actions from AD 2021-16-18	Up to 69 work-hours X \$85 per hour = \$5,865	\$0	Up to \$5,865	Up to \$656,88-

New proposed action	Up to 7 work-hours X \$85 per hour = \$595	\$9,648	Up to \$10,243	Up to \$1,147,216
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### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive (AD) 2021-16-18, Amendment 39-21681 (86 FR 60560, November 3, 2021); and

b. Adding the following new AD:

**2023-13-04 Airbus SAS:** Amendment 39-22489; Docket No. FAA-2023-0924; Project Identifier MCAI-2022-01262-T.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2021-16-18, Amendment 39-21681 (86 FR 60560, November 3, 2021) (AD 2021-16-18).

#### **(c) Applicability**

This AD applies to all Airbus SAS Airplanes, certificated in any category, and identified in paragraphs (c)(1) through (9) of this AD.

(1) Model A330-223F and -243F airplanes.

(2) Model A330-201, -202, -203, -223, and -243 airplanes.

(3) Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes.

(4) Model A330-841 airplanes.

- (5) Model A330-941 airplanes.
- (6) Model A340-211, -212, and -213 airplanes.
- (7) Model A340-311, -312, and -313 airplanes.
- (8) Model A340-541 airplanes.
- (9) Model A340-642 airplanes.

**(d) Subject**

Air Transport Association (ATA) of America Code 28, Fuel.

**(e) Unsafe Condition**

This AD was prompted by reports of a fuel pump showing cavitation erosion that exposed the fuel pump power supply wires, and a determination that affected fuel pumps must be replaced with new, more erosion resistant pumps. The FAA is issuing this AD to address fuel pump erosion caused by cavitation. If this condition is not addressed, a pump running dry could result in a fuel tank explosion and consequent loss of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Requirements**

Except as specified in paragraphs (h) and (i) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2022-0197, dated September 22, 2022 (EASA AD 2022-0197).

**(h) Exceptions to EASA AD 2022-0197**

(1) Where EASA AD 2022-0197 refers to its effective date, this AD requires using the effective date of this AD.

(2) Where EASA AD 2022-0197 refers to “31 December 2020 [the effective date of EASA AD 2020-0283],” this AD requires using “December 8, 2021 (the effective date of AD 2021-16-18).”



(3) Where EASA AD 2022-0197 refers to “13 December 2019 [the effective date of EASA AD 2019-0291 at original issue],” this AD requires using “November 18, 2020 (the effective date of AD 2020-21-05, Amendment 39-21278 (85 FR 64963, October 14, 2020)).”

(4) Where EASA AD 2022-0197 refers to “17 November 2017 [the effective date of EASA AD 2017-0224],” this AD requires using “December 29, 2017 (the effective date of AD 2017-25-16, Amendment 39-19130 (82 FR 58718, December 14, 2017)).”

(5) Where EASA AD 2022-0197 refers to the master minimum equipment list (MMEL), this AD refers to the operator's existing minimum equipment list (MEL).

(6) Where paragraphs (15), (16), and (17) of EASA AD 2022-0197 specify to “inform all flight crews, and, thereafter, operate the aeroplane accordingly,” this AD does not require those actions as those actions are already required by existing FAA operating regulations (see 14 CFR 121.628(a)(2) and 121.628(a)(5)).

(7) Where the Definitions section of EASA AD 2022-0197 specifies “erosion cases and breakthrough” and refers to “Eaton Aerospace Ltd SB 8810-28-06 Revision 2 (or later revisions),” for this AD, use only Eaton Service Bulletin 8810-28-06, Revision 2, dated March 1, 2019.

(8) Where Note 4 of EASA AD 2022-0197 specifies additional information, replace the text “EASA AD 2015-0194” with “EASA AD 2015-0194 (corresponding FAA AD 2016-20-10, Amendment 39-18676 (81 FR 71593, October 18, 2016) (AD 2016-20-10)).”

(9) This AD does not adopt the “Remarks” section of EASA AD 2022-0197.

(10) Where paragraphs (5) and (6) of EASA AD 2022-0197 specify a compliance time to replace part number (P/N) 568-1-28300-101, for airplanes identified in AD 2016-20-10, the required compliance time for replacing fuel pumps having P/N 568-1-28300-

101, or a combination of P/N 568-1-28300-101 and certain other part numbers, is specified in paragraphs (h)(1) and (2) of AD 2016-20-10, as applicable.

**(i) No Reporting Requirement**

Although the service information referenced in EASA AD 2022-0197 specifies to submit certain information to the manufacturer, this AD does not include that requirement.

**(j) Additional AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the International Validation Branch, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, International Validation Branch, FAA; or EASA; or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC)*: Except as required by paragraph (j)(2) of this AD, if any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not

identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

**(k) Additional Information**

For more information about this AD, contact Vladimir Ulyanov, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 206-231-3229; email [Vladimir.Ulyanov@faa.gov](mailto:Vladimir.Ulyanov@faa.gov).

**(l) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Eaton Service Bulletin 8810-28-06, Revision 2, dated March 1, 2019.

(ii) European Union Aviation Safety Agency (EASA) AD 2022-0197, dated September 22, 2022.

(3) For Eaton service information identified in this AD, contact Eaton Limited, Customer Support, Abbey Park, Southampton Road, Titchfield, Fareham, Hampshire, PO14 4QA, U.K.; telephone + 01 329853000; Fax + 01 329853714.

(4) For EASA AD 2022-0197, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu); website [easa.europa.eu](http://easa.europa.eu). You may find this EASA AD on the EASA website at [ad.easa.europa.eu](http://ad.easa.europa.eu).

(5) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(6) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html).

Issued on July 13, 2023.

Victor Wicklund, Deputy Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2023-15225 Filed: 7/18/2023 8:45 am; Publication Date: 7/19/2023]